

WHAT IS CLAIMED IS:

1. A mobile communication system for providing a phone number maintaining service capable of allowing a user to continue to use a previously
5 assigned phone number regardless of a change in service provider, the system comprising:

a first mobile switching center (MSC) for receiving a call request signal with calling terminal information and called terminal information, determining an initial service provider of a called terminal from the called terminal
10 information, and transmitting the call request signal to a communication network formed by the determined initial service provider of the called terminal;

a second MSC for determining a changed service provider of the called terminal based on the called terminal information included in the call request signal transmitted from the first MSC, and transmitting the call request signal to
15 a communication network formed by the determined service provider; and

a third MSC for transmitting the call request signal received from the second MSC to the called terminal so that the called terminal can communicate with the calling terminal over a communication network formed by the changed service provider.

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2. The mobile communication system of claim 1, further comprising a subscriber management database (DB) for storing service change information including information relating to an initial service provider of the calling terminal and the called terminal, and information relating to a change in
25 the service provider, wherein the first MSC detects an initial service provider of the called terminal based on the service change information, and the second MSC determines whether a service provider of the called terminal is changed, based on the service change information.

30 3. The mobile communication system of claim 2, wherein the

service change information includes serial numbers of the calling terminal and the called terminal, a service provider change identification number, a service provider identification number, and a mobile identification number.

5 4. The mobile communication system of claim 3, wherein the first MSC determines the mobile identification number stored in the subscriber management DB, determines the service provider change identification number and the service provider identification number stored in association with the determined mobile identification number, and determines an initial service
10 provider of the called terminal through the service provider change identification number and the service provider identification number.

 5. The mobile communication system of claim 4, wherein the second MSC determines whether a service provider of the called terminal is
15 changed, based on the service provider change identification number.

 6. A method for providing a phone number maintaining service capable of allowing a user to continue to use a previously assigned phone number regardless of a change in service provider in a mobile communication system, the
20 method comprising the steps of:

 a) receiving a call request signal with calling terminal information and called terminal information, determining an initial service provider of a called terminal from the called terminal information, and transmitting the call request signal to a communication network formed by the determined initial service
25 provider of the called terminal;

 b) determining a changed service provider of the called terminal based on the called terminal information included in the call request signal, and transmitting the call request signal to a communication network formed by the determined service provider; and

30 c) transmitting the call request signal transmitted in step b) to the called

terminal so that the called terminal can communicate with the calling terminal over a communication network formed by the changed service provider.

7. The method of claim 6, wherein step a) comprises the step of
5 determining an initial service provider of the called terminal based on service change information including information related to an initial service provider of the calling terminal and the called terminal, and information related to a change in the service provider; and step b) comprises the step of determining whether a service provider of the called terminal is changed, based on the service change
10 information.

8. The method of claim 7, wherein the service change information includes serial numbers of the calling terminal and the called terminal, a service provider change identification number, a service provider identification number,
15 and a mobile identification number.

9. The method of claim 8, wherein step a) comprises the step of determining the mobile identification number from the service change information, determining the service provider change identification number and
20 the service provider identification number stored in association with the detected mobile identification number, and determining an initial service provider of the called terminal through the service provider change identification number and the service provider identification number.

25 10. The method of claim 9, wherein step b) comprises the step of determining whether a service provider of the called terminal is changed, based on the service provider change identification number.

11. A mobile terminal for receiving a phone number maintaining
30 service capable of allowing a user to continue to use a previously assigned phone

number regardless of a change in service provider, the terminal comprising:

a memory for storing NAM (Number Assignment Module) information for receiving the phone number maintaining service;

a key input module having a plurality of keys, for generating a call request signal input by the user;

an RF (Radio Frequency) module for transmitting and receiving a call request signal including called terminal information and calling terminal information;

a display for displaying a phone number of a calling terminal, determined from the received calling terminal information; and

a controller for transmitting the call request signal to a called terminal through the RF module, and upon receiving a call request signal through the RF module, determining a phone number of the calling terminal from the calling terminal information included in the received call request signal.

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12. The mobile terminal of claim 11, wherein the NAM information includes a service provider change identification number, a service provider identification number and a mobile identification number, for receiving a mobile communication service.

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13. The mobile terminal of claim 12, wherein the service provider change identification number is updated in the memory each time a service provider to which the mobile terminal has subscribed is changed.

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14. The mobile terminal of claim 13, wherein the controller determines the service provider change identification number from the calling terminal information, determines a changed service provider identification number based on the detected service provider change identification number, and determines a phone number of the calling terminal by combining the changed

30 service provider identification number with the mobile identification number

included in the calling terminal information.

15. The mobile terminal of claim 14, wherein the service provider change identification number has two digits, a first digit indicates addition or subtraction on the service provider identification number and a second digit indicates a weight for performing addition or subtraction on the service provider identification number.

16. The mobile terminal of claim 15, wherein if a value of the first digit of the service provider change identification number is "0," the first digit indicates addition on the service provider identification number, and if a value of the first digit of the service provider change identification number is "1," the first digit indicates subtraction on the service provider identification number.

17. The mobile terminal of claim 16, wherein the controller calculates the changed service provider identification number by adding a value of the second digit of the service provider change identification number to the service provider identification number, if the first digit value of the service provider change identification number is "0."

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18. The mobile terminal of claim 17, wherein the controller calculates the changed service provider identification number by subtracting a value of the second digit of the service provider change identification number from the service provider identification number, if the first digit value of the service provider change identification number is "1."